

What is claimed is:

1. An activatable drying device which comprises a sheet-form matrix having at least one regenerable desiccant present therein.
- 5 2. The drying device as claimed in claim 1, which further comprises a layer of a water-vapor-permeable material.
3. The drying device as claimed in claim 1, which further comprises a pressure-sensitively adhesive layer.
4. The drying device as claimed in claim 1, which further comprises a protective layer.
- 10 5. The drying device as claimed in claim 1, which further comprises a support layer.
6. The drying device as claimed in claim 1, which further comprises a backing layer (release liner).
- 15 7. The drying device as claimed in claim 1, wherein the desiccant matrix is elastic.
8. The drying device as claimed in claim 1, wherein the desiccant matrix is pressure-sensitively adhesive.
9. The drying device as claimed in claim 1, wherein said regenerable desiccant is selected from the group consisting of  $\text{CaCl}_2$ ,  $\text{CaSO}_4$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{Na}_2\text{SO}_4$  and polyvinylpyrrolidone.
- 20 10. The drying device as claimed in claim 1, wherein said sheet-form matrix comprises a polymeric material.
11. The drying device as claimed in claim 1, wherein said regenerable desiccant is present in an amount of between 0.5 and 70% in said sheet-form matrix (based on the overall weight of the matrix).
- 25 12. The drying device as claimed in claim 1, wherein the sheet-form matrix present therein has a height of between about 50  $\mu\text{m}$  and 3 mm.
- 30 13. A process for producing a sheet-form drying device, which comprises:
  - a) preparing a desiccant matrix comprising a regenerable desiccant in nonactive form, with no additional measures to reduce the moisture content of the ambient air space,
  - b) if desired, performing further steps for producing a sheet-form drying device comprising said desiccant matrix, these steps likewise being performed without additional measures to reduce the moisture content of the ambient air space, and
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- c) subsequently activating the sheet-form drying device.
14. The process as claimed in claim 13, wherein said activating takes place by storing the sheet-form drying device at increased temperature.
15. The process as claimed in claim 13, wherein said activating takes place by irradiating the sheet-form drying device with infrared light.
16. The process as claimed in claim 13, wherein said activating takes place by irradiating the sheet-form drying device with microwaves.
17. The process as claimed in claim 13, wherein said activating is assisted by additional air circulation.
18. The process as claimed in claim 13, wherein said activating is further assisted by a reduced external pressure.
19. The process as claimed in claim 13, wherein said activating takes place by a combination of storage at increased temperature and/or irradiation with infrared light and/or irradiation with microwaves, with or without the use of additional measures comprising additional air circulation and/or reduced external pressure.
20. The use of a sheet-form, activatable drying device for reducing or maintaining constant a defined moisture content of a closed gas space surrounding said device.
21. The use as claimed in claim 20, wherein said gas space surrounding said device further comprises a moisture-sensitive article.
22. The use as claimed in claim 20, wherein the moisture-sensitive article is a food, a drug, a diagnostic agent, a medicament, a chemical, or a biologically activatable material.
23. The use as claimed in claim 20, wherein the moisture-sensitive article is a tablet, a transdermal therapeutic system, or a sheet-form pharmaceutical administration form for oral use.
24. The use of a sheet-form drying device for removing molecules of organic solvents and/or odorous substances from a gas space surrounding said device.
25. A method of reducing the moisture content of a closed gas space and/or maintaining a reduced moisture content of a closed gas space, which comprises
- a) in a first step converting an activatable drying device, comprising a sheet-form matrix having at least one regenerable desiccant, by activation into the active state,

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- b) in a further step placing the activatable drying device in the active state into the gas space whose moisture content is to be reduced and/or whose reduced moisture content is to be maintained,
- c) in a further step airtightly closing said gas space with respect to the surroundings; and
- d) in a further step, the activatable drying device in the active state absorbs moisture from the airtightly closed gas space over a period of at least one hour.

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